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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/680,721	10/06/2000	Frederick Browne Gregg	64908	2099

7590 01/03/2003

Christopher F. Regan Esquire
Allen Dyer Doppelt Milbrath & Gilchrist PA
PO Box 3791
Orlando, FL 32802-3791

EXAMINER

RUDDOCK, ULA CORINNA

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 01/03/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/680,721

Applicant(s)

Gregg et al.

Examiner

Ula Corinna Ruddock

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Oct 22, 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18, 20-28, and 54-64 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18, 20-28, and 54-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. The Examiner has carefully considered Applicant's amendments and accompanying remarks filed October 22, 2002. The rejection in view of EP 503383 has been overcome.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Specification

3. The abstract of the disclosure is objected to because it is too long. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

4. Claims 1- 7, 11,12, 14,15, 17, 18,20, 21, 25, 26, and 54-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/11357 (WO '357) in view of Huege et al. (US 6,395,205). WO '357 discloses a cement panel comprising a core of aerated concrete and a surface finish on both sides, reinforced with a fiberglass net (page 2, ln 16-20). According to *Fairchild's Dictionary of Textiles*, a net is a general term for an open fabric formed by weaving (i.e. a woven net). As a result, it is the Examiner's position that the fiberglass net of WO '357 is a woven mesh as required by the present invention. With regard to claims 6 and 20, according to Figure 1, the fiberglass net is on both surfaces of the aerated concrete core. It should be noted that a cement panel such as the one described by WO '357 inherently has two opposing surfaces. The aerated concrete in the

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panel has preferably a specific weight (i.e. density) of 0.3 to 0.8 kg/dm³ or 18.72 to 49.94 lb/ft (page 3, ln 8-10). It should also be noted that specific weight and density are the same things, as taught by Henrich (US 6,255,391 at col 3, ln 40). According to Figure 1, the panel is generally rectangular as required by the present invention and inherently has opposing side edges and a pair of opposing end edges. Furthermore, the standard width of the panel is 1.2 meters or 3.93 feet (page 3, ln 34). With regard to the newly added amendments, the core is coated on both sides by a layer of resin-based mortar and is reinforced with fiberglass netting (page 1, ln 13-15 and page 2, ln 16-20). The Examiner is equating the two layers of resin-based mortar of WO '357 to the moisture resistant resin face layer of the present invention. WO 95/11357 fails to disclose that the aerated concrete is autoclaved.

Huege et al. (US 6,395,205) disclose that the production of autoclaved aerated concrete is well-established (col 1, ln 22-23). The concrete is placed in an autoclave to build strength, rigidity, and durability (col 1, ln 34-36). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used Huege's autoclaving method on the aerated concrete of WO '357, motivated by the desire to obtain concrete having increased strength, rigidity, and durability.

With regard to claims 12, 15, 26, and 60, WO '357 and Huege et al. disclose the claimed invention except for the teaching that the core has a thickness in a range of about 1/4 to 1 inch and

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that the core has a length in a range of about 5 to 16 feet. It should be noted that the optimizing the thickness and the length of the core are result effective variables. A thicker core would directly effect the strength of the entire panel. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have used a core having a thickness in a range of about 1/4 to 1 inch and a core having a length in a range of about 5 to 16 feet, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have optimized both the thickness and length of the core motivated by the desire to obtain a panel with increased strength.

5. Claims 8 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/11357 (WO '357) and Huege et al. (US 6,395,205), as set forth above, in view of Lawlis et al. (US 4,065,333). WO '357 and Huege et al. disclose the claimed invention except for the teaching that the surface has beveled portions. Lawlis et al. disclose a wallboard having side edges each having a flat portion and also a beveled portion adjacent the front face (col 1, ln 67-68 to col 2, ln 1). It would have been obvious to have beveled the edges of the surface of WO '357 and Huege et al. as taught by Lawlis et al. motivated by the desire to obtain a panel that results in ease of handling and installation.

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6. Claims 9 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/11357 (WO '357) and Huege et al. (US 6,395,205), as set forth above, in view of Green et al. (US 5,552,187). WO 95/11357 (WO '357) and Huege et al. (US 6,395,205) disclose the claimed invention except for the teaching that the moisture-resistant resin face layer extends around the opposing side edges. Green et al. disclose a coated fibrous mat-faced gypsum board that has coating applied to the surface of the fibrous mat which is sufficient to embed the mat completely in the coating (col 10, ln 1-4). It should be noted that the Examiner is equating Green's disclosure of the coating completely embedding the fibrous mat to Applicant's disclosure that the resin face layer extends around the opposing side edges because by completely embedding the fibrous mat with a coating, the side edges of the fibrous mat would be embedded as well. Therefore, it would have been obvious to one having ordinary skill in the art to have used Green's method of completely embedding the fibrous mat (i.e. extending the face layer around the opposing edges) on the panel of WO '357 and Huege et al., motivated by the desire to obtain a panel that is completely protected from moisture and deterioration.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/11357 (WO '357), Huege et al. (US 6,395,205), Green et al. (US 5,552,187), as applied to claim 9 above, and further in view of Ensminger et al. (US 5,221,386). WO 95/11357, Huege et al., and Green et al. disclose the claimed invention except for the teaching that the opposing end edges of the core

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are exposed. Ensminger et al. disclose a cement board having reinforced edges. Ensminger et al. disclose cutting away the mat from the border regions of the upper composite web (col 3, ln 3-5), which the Examiner is equating to the disclosure by the present invention of opposing end edges of the core being exposed. It would have been obvious to one having ordinary skill in the art to cut away the mat from the border regions of the upper composite web as taught by Ensminger et al. on the panel of WO '357, Huege et al., Green et al., motivated by the desire to improve adhesive bonding between the core and the moisture-resistant material..

8. Claims 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/11357 (WO '357) and Huege et al. (US 6,395,205), as set forth above, in view of Ensminger et al. (US 5,221,386). WO 95/11357 and Huege et al. disclose the claimed invention except for the teaching that the opposing end edges of the core are exposed. Ensminger et al. disclose a cement board having reinforced edges. Ensminger et al. disclose cutting away the mat from the border regions of the upper composite web (col 3, ln 3-5), which the Examiner is equating to the disclosure by the present invention of opposing end edges of the core being exposed. It would have been obvious to one having ordinary skill in the art to cut away the mat from the border regions of the upper composite web as taught by Ensminger et al. on the panel of WO '357 and Huege et al., motivated by the desire to improve adhesive bonding between the core and the moisture-resistant material.

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9. Claims 13 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/11357 (WO '357) and Huege et al. (US 6,395,205), as set forth above, in view of Restrepo (US 4,407,676). WO '357 and Huege et al. disclose the claimed invention except for the teaching that the core further comprises reinforcing fibers in the aerated concrete. Restrepo discloses fiber-reinforced cement. The lightweight concrete is known as aerated concrete (col 3, ln 22-24). Plastic fibers are used to reinforce the cementitious matrix (col 4, ln 17-20). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the reinforcing plastic fibers of Restrepo in the core of WO '357 and Huege et al., motivated by the desire to obtain a concrete core with increased resistance to tensile loads and impact loading.

10. Claims 16 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/11357 (WO '357) and Huege et al. (US 6,395,205), as set forth above, in view of King (US 5,002,620). WO '357 and Huege et al. disclose the claimed invention except for the teaching that the core comprises first and second portions aligned in end-to-end relation at respective opposing edges thereof and that an adhesive layer joins the opposing edges of the first and second portions together. King disclose fiber-reinforced cellular concrete. The finished sheets of concrete are then cut to a desired length and the lightweight fractions from opposed sheets are bonded together in sandwich form. A suitable resin is disposed between the opposed lightweight fractions (col 4, ln 12-21). It would have been obvious to one having ordinary skill in the art at the time the invention

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was made to have used King's method of bonding the finished opposed sheets with a suitable resin on the panel of WO '357 and Huege et al., motivated by the desire to obtain a panel that can be easily manufactured and transported.

Response to Arguments

11. Applicant's arguments filed October 22, 2002, have been fully considered but they are not persuasive for the reasons set forth. Applicant argues that neither EP 503383 and WO 95/11357 disclose an autoclaved aerated concrete and a moisture-resistant resin face layer. As noted above, the Examiner cites Huege et al. (US 6,395,205) for its disclosure that the production of autoclaved aerated concrete is well-established (col 1, ln 22-23). The concrete is placed in an autoclave to build strength, rigidity, and durability (col 1, ln 34-36). As a result, one having ordinary skill in the art would have been motivated to have used Huege's autoclaving method on the aerated concrete of WO '357, motivated by the desire to obtain concrete having increased strength, rigidity, and durability. Furthermore, it should be noted that the Examiner is equating the two layers of resin-based mortar to the moisture resistant resin face layer of the present invention. Therefore, the combination of WO '357 and Huege et al. (US 6,395,205) results in the claimed invention.

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Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is (703) 305-0066. The Examiner can normally be reached Monday through Thursday from 6:30 AM to 5 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor Terrel Morris can be reached at (703) 308-2414.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 308-2351.

Ula C. Ruddock *u cr*
Patent Examiner
Art Unit 1771
December 24, 2002


TERREL MORRIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700